WHAT IS CLAIMED IS:

1. A method for loading a drug onto an endovascular device, said method comprising the steps of :

- electrodepositing an hydrophobic molecule containing a diazonium moiety onto the surface of an endovascular device to obtain a functionalized surface of said device; and
- depositing passively a lipophilic drug onto said functionalized surface, said drug binding to the diazonium moiety of the molecule for slow elution into a tissue when said device is brought in contact with said tissue *in vivo*.

2. The method of claim 1, wherein the endovascular device is made of stainless steel.

3. The method of claim 2, wherein the hydrophobic molecule is selected from the group consisting of 4-decycloxyphenyl diazonium chloride zinc chloride, 3-ethoxycarbonyl naphtalene diazonium tetrafluoroborate, 3,5-dichlorophenyl diazonium tetrafluoroborate, 2-chloro-4-benzamido-5-methylbenzene diazonium chloride

hemizinc chloride, and 4-bromobenzene diazonium tetrafluoroborate.

4. The method of claim 2, wherein the drug is selected from the group consisting of anti-proliferative agent, anti-inflammatory agent, anti-thrombotic drug, bioactive agent which promotes healing of a tissue, anti-neoplastic drug, anti-coagulant, fibrinolytic agent, non-steroidal anti-inflammatory drug (NSAID), steroidal anti-inflammatory drug, sodium channel blocker and calcium channel blocker, nitric oxide donor, alpha-adrenoceptor blocker, genetic material containing DNA and RNA, antibody, prostaglandin, leukotriene, elastin, collagen, integrin, growth factor, radioactive molecule.

5. The method of claim 4, wherein the anti-neoplastic drug is selected from the group consisting of alkylating agent, antimetabolite, antibiotic, mitotic inhibitor, hormone.

6. The method of claim 5, wherein the alkylating agent is cisplatin or melphalan.

7. The method of claim 5, wherein the antimetabolite is methotraxate or 5-fluorouracil.

8. The method of claim 5, wherein the antibiotic is actinomycin D, bleomycin or rapamycin.

9. The method of claim 5, wherein the mitotic inhibitor is selected from the group consisting of vincristine, vinblastine, paclitaxel, and colchicine.

10. The method of claim 5, wherein the hormone is prednisone or tamoxifen.

11. The method of claim 4, wherein the fibrinolytic agent is streptokinase or urokinase.

12. The method of claim 4, wherein the NSAID is ibuprofen or naproxen.

13. The method of claim 4, wherein the steroidal anti-inflammatory drug is prednisone.

14. The method of claim 4, wherein the sodium channel blocker is lidocaine or procainamide.

15. The method of claim 4, wherein the calcium channel blocker is nifedipine or verapamil.

16. The method of claim 4, wherein the nitric oxide donor is nitroglycerin.

17. The method of claim 4, wherein the alpha-adrenoceptor blocker is phentolamine or prazosin.

18. The method of claim 4, wherein the anti-coagulant is heparin or coumarin.

19. The method of any one of claims 1 to 18, wherein the step of depositing passively the drug is effected in an organic solvent.

20. The method of claim 19, wherein the organic solvent is ethanol or acetonitrile.

21. A drug-eluting endovascular device comprising:

- an endovascular device;

- an hydrophobic linker molecule containing a diazonium moiety electrodeposited onto the surface of the endovascular device; and
- a lipophilic drug passively deposited on the linker molecule, said drug binding to the linker molecule through hydrophobic interactions for elution from the endovascular device over time.

22. The endovascular device of claim 21, wherein the device is selected from the group consisting of balloon-expandable stent, self-expandable stent, and graft.

23. The endovascular device of claim 21, wherein said endovascular device is made of stainless steel.

24. The endovascular device of claim 23, wherein the hydrophobic linker molecule is selected from the group consisting of 4-decycloxyphenyl diazonium chloride zinc chloride, 3-ethoxycarbonyl naphtalene diazonium tetrafluoroborate, 3,5-dichlorophenyl diazonium tetrafluoroborate, 2-chloro-4-benzamido-5-methylbenzene

diazonium chloride hemizinc chloride, and 4-bromobenzene diazonium tetrafluoroborate.

25. The endovascular device of claim 23, wherein the drug is selected from the group consisting of anti-proliferative agent, anti-inflammatory agent, anti-thrombotic drug, conversion enzyme inhibitor, bioactive agent which promotes healing of a tissue, anti-neoplastic drug, anti-coagulant, fibrinolytic agent, non-steroidal anti-inflammatory drug (NSAID), steroidal anti-inflammatory drug, sodium channel blocker and calcium channel blocker, nitric oxide donor, alpha-adrenoceptor blocker, genetic material containing DNA and RNA, antibody, prostaglandin, leukotriene, elastin, collagen, integrin, growth factor, radioactive molecule.

26. The endovascular device of claim 25, wherein the anti-neoplastic drug is selected from the group consisting of alkylating agent, antimetabolite, antibiotic, mitotic inhibitor, hormone.

27. The endovascular device of claim 26, wherein the alkylating agent is cisplatin or melphalan.

28. The endovascular device of claim 26, wherein the antimetabolite is methotraxate or 5-fluorouracil.

29. The endovascular device of claim 26, wherein the antibiotic is actinomycin D, bleomycin or rapamycin.

30. The endovascular device of claim 26, wherein the mitotic inhibitor is selected from the group consisting of vincristine, vinblastine, paclitaxel, and colchicine.

31. The endovascular device of claim 26, wherein the hormone is prednisone or tamoxifen.

32. The endovascular device of claim 25, wherein the fibrinolytic agent is streptokinase or urokinase.

33. The endovascular device of claim 25, wherein the NSAID is ibuprofen or naproxen.

34. The endovascular device of claim 25, wherein the steroidal anti-inflammatory drug is prednisone.

35. The endovascular device of claim 25, wherein the sodium channel blocker is lidocaine or procainamide.

36. The endovascular device of claim 25, wherein the calcium channel blocker is nifedipine or verapamil.

37. The endovascular device of claim 25, wherein the nitric oxide donor is nitroglycerin.

38. The endovascular device of claim 25, wherein the alpha-adrenoceptor blocker is phentolamine or prazosin.

39. The endovascular device of claim 25, wherein the anti-coagulant is heparin or coumarin.

40. The endovascular device of claim 23 characterized in that said device is a stent or a coil.